

# MULTIPLE STEP ADAPTIVE METHOD FOR TIME SCALING

## Abstract

A multiple step adaptive method for time scaling. Synthesizing  $S_3[n]$  signal from signal  $S_1[n]$  signal and  $S_2[n]$  signal. Comprising following steps: (a) calculating a first magnitude of a cross-correlation function of  $S_1[n]$  signal and  $S_2[n]$  signal according to a first index; (b) comparing the first magnitude with a threshold value; (c) if first magnitude is smaller than threshold value, calculating a first reference magnitude of cross-correlation function of  $S_1[n]$  signal and  $S_2[n]$  signal according to a first reference index behind the first index by a first determined number, or calculating a second reference magnitude of the cross-correlation function of the  $S_1[n]$  signal and the  $S_2[n]$  signal according to a second reference index behind the first index by a second number; (d) synthesizing the  $S_3[n]$  signal by adding  $S_1[n]$  signal to the  $S_2[n]$  signal in accordance with a maximum index corresponding to a largest magnitude among all the magnitudes calculated in (c).